ILLINOIS ENVIRONMENTAL PROTECTION AGENCY MEMORANDUM

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DATE: August 21, 1984

TO: Division File

FROM: M. D. Grant and P. M. McCarthy

SUBJECT: LPC 1191150l - Madison County - Wood River/Amoco Oil - Main Plant
ILD980700967

On August 6, 1984, an ISS inspection was conducted at Amoco Oil's Main Plant Facility in Wood River, Illinois by Pat McCarthy and Mike Grant. Amoco Oil shut down the refinery in Wood River in May of 1981. Current operations at the Main Plant consist of Amoco's Marketing Division, which operates a terminal for fuel storage and Amoco Petroleum Additives. Mr. Ed Sullivan, an Environmental Consultant from Amoco Oil's Chicago office, and Mr. Dick Sumner, an Environmental Engineer for the Amoco Petroleum Additives at the Wood River Plant, accompanied us on our inspection. Mr. Sullivan formerly worked at the Wood River Plant, when the refinery was in operation and was familiar with the hazardous waste operations. Mr. Sumner now keeps all of the records pertaining to Interim Status requirements. Amoco's Main Plant submitted a Closure Plan on July 12, 1984 for approval instead of a Part B permit application.

The Doctor Sweetening Plant was the first area visited during our inspection. The Doctor Sweetening process was used to improve the odor of gasoline. This operation ceased when the refinery shut down. There were three hazardous waste management activities, which occurred as a result of this process. Three dumpsters were used to store lead sulfide. One tank was utilized to store the spent doctor solution and another tank to dissolve sodium sulfide, which was used to precipitate lead from the spent doctor solution. The three dumpsters were cleaned out and decontaminated, per Mr. Sullivan, and are now used for other operations. Mr. Sullivan also told us the two covered tanks had all the free liquids removed and now only contain the solid residues, which accumulated on the sides and bottoms of the tanks. There are no weekly inspections conducted for these two tanks. The tanks are to be decontaminated when their closure plan is approved.

In the past, the facility had some drums of aluminum chloride. Amoco attempted to find a disposal facility to accept these drums. When this attempt failed, they realized the two water softener solids pits were suitable for their disposal. The drums and associated rinsate were emptied into the pits. Aluminum chloride is reactive with water. This reaction brought the pH level down to less than 2. These pits are used to receive solids laden blowdown from the lime caustic softening of boiler feedwater. The introduction of this lime feedwater (which has a high pH value) into the water neutralized the aluminum chloride, which was disposed of in the pits. Mr. Sullivan and Mr. Sumner told us samples have been taken on numerous occasions and no traces of aluminum chloride had been found. These two impoundments are on the facility's Part A application and are scheduled for clean-up in the facility's closure plan. There are no inspections being conducted at these two impoundments. Per Dave Dolan of the USEPA, who is the assigned "Part B" reviewer, these two pits are in the RCRA system until a revised Part A is submitted with the adequate information to withdraw this activity. Therefore, until a revised Part A application has been approved, these two surface impoundments are subject to the regulations.

The railroad tank car, which was used to store off-spec formaldehyde, had been sold for scrap. We were told it was emptied and decontaminated. The formaldehyde went to a tank prior to being fed into the boiler to reclaim its heat value. The tank was referred to as Tank 279, however, the decontamination of Tank #279 was not made clear. An explanation of this operation has been requested in the CIL.

Another surface impoundment observed during our inspection was referred to as the Spray Pond. It was divided into various cells. Mr. Sullivan told us that this sampling showed only the most northerly cell to have a high sulfide content. The area contaminated was right below a discharge pipe. During the refinery operations, water was recycled throughout the Spray Pond for cooling and to oxidize the sulfides. However, the heavier sulfides seem to have settled out in the area below the discharge pipe. Amoco classified this waste as D003 reactive. Amoco only conducts weekly inspections of this area, when the freeboard level should be inspected daily. Another apparent violation is storing reactive waste in a surface impoundment without rendering it non-reactive.

There is also one other small surface impoundment on Amoco's Main Plant Facility which is regulated by the Interim Status Standards. This impoundment is referred to as the "South Flare Pit". On the facility's Part A application they listed this impoundment as containing sulfides (which are reactive) and a listed reactive waste U189 (sulfur phosphide). We asked Mr. Sullivan and Mr. Sumner the status of the waste in these impoundments. They told us that the analysis showed no traces of U189, nor sulfides, but did fail the EP toxicity test for lead. Also, traces of silver had been found. This impoundment is also only inspected weekly. However, according to the facility's Part A application and the closure plan submitted June, 1984 for approval, this impoundment contains D001 (ignitable waste) and U189 (a reactive waste). Storing an ignitable and/or a reactive waste in an impoundment must not be conducted, unless the waste is rendered non-reactive or non-ignitable prior to or immediately after placing the waste in an impoundment. A dumpster, which is used to physically treat calcium oxide bags, was also inspected. This unit was operating during our inspection. The treatment consists of putting the empty bags into the dumpster and soaking them with water. The calcium-oxide bags are classified as reactive. If the bags are not thoroughly soaked, thay may generate enough heat to ignite. The dumpster was full of these bags and a fire hydrant was spraying in water. The water runs out of the dumpster and into the sewer to be treated at the wastewater treatment plant. Neither the run-off, nor the wet paper bags are hazardous.

We were also shown several other areas, which Amoco Oil had notified under CERCLA. One surface impoundment and a couple of past disposal areas where they believed API separator sludge had been buried were observed.

A review of the facility's paperwork revealed that the inspection records were missing (these inspections are the ones mentioned earlier). Also there was no documentation of the arrangements agreed to by the local authorities.

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There are several other questionable areas that must be addressed. Some of these areas become more complicated than others by the involvement of another Division of Amoco, that being, Amoco Marketing. The areas of concern will be addressed in the CIL and are listed as follows:

1. Status of Tank #279
As stated in the facility closure plan, the formaldehyde was transferred from the railroad tank car to Tank #279. The closure plan does not definately state the final disposition of the waste, but rather says "The formaldehyde and rinsate that was delivered to Tank # 279 would gradually have been drawn to the plant sewer and destroyed in the refinery wastewater treatment plant". However, this date, Mr. Sullivan stated that this material was sent to the boiler and utilized as a fuel. This discrepancy must be clarified.

2. South Flare Pit
A question, which will be posed in the CIL, relates to the waste in this pit. The closure plan states that the "pit impounds waste oils and sludges (from additive manufacturing operations) and water". This facility continues to manufacture oil additives, but they were not specific concerning the disposition of any resultant waste.

3. Leaded Tanks
This area, as are #'s 4 and 5 are, according to Mr. Sullivan, no longer under the control of Amoco Oil or Amoco Petroleum Additives, but rather are now the responsibility of Amoco Marketing, which is operating a fuel depot. We asked Mr. Sullivan to explain the plans of Amoco Oil relating to the closure of the leaded storage tanks in the refinery. He stated that Amoco Oil would not "close out" the tanks, but rather Amoco Marketing would, and that he was not aware of their plans. He did state that an unidentified Amoco Marketing official indicated that the tanks need not be closed out under RCRA, because they were no longer K052, since the "refinery" was closed. Mr. Sullivan stated that he did not agree with that position and informed (via memo) the Amoco Marketing representative of the same. We told Mr. Sullivan that we agreed with him, and that the CIL would inform him of the Agency's position. He agreed to relay the information to Amoco Marketing. We are not currently aware of any violations in this area.

4. Asphalt Production Tanks
This portion of the facility is also closed. Dependent upon the source of the crude oil and the method of processing, the asphalt residue may or may not be defined as hazardous. However, the CIL will include language that recommends compliance with Section 722.111, when the residue is removed.

5. Status of Ditch Area near Tanks #239-242
While driving through the south central area of the refinery with Messrs. Sullivan and Sumner, we observed a roadside ditch near tanks #239-242 that contained an oily liquid. Mr. Sumner explained that several months ago, Amoco Marketing experienced a problem with a sump pump, while pumping out an area within the bermed portion of some storage tanks. So instead of

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pumping it to the WWTP, as is routine, they pumped it into a roadside ditch. We told Mr. Sullivan that we could not condone this practice and that the liquid and any contaminated soil would have to be removed and disposed of properly. Analyses would have to be performed to accomplish this removal. This will be mentioned in the CIL.

MDG:PMM:jlr

cc: Southern Region File

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